

**AVIAN PREDATION ON JUVENILE
SALMONIDS IN THE LOWER
COLUMBIA RIVER RESEARCH
PROJECT**

Finding of No Significant Impact (FONSI)

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Department of Energy

BONNEVILLE POWER ADMINISTRATION

Avian Predation on Juvenile Salmonids in the Lower Columbia River Research Project

Finding of No Significant Impact (FONSI)

Summary: Bonneville Power Administration (BPA) is proposing to fund the Avian Predation on Juvenile Salmonids in the Lower Columbia River Research Project. This project proposes to continue the research on Caspian terns, double-crested cormorants, and glaucous-winged gulls begun in 1996. BPA has prepared an Environmental Assessment (EA) (DOE/EA-1374) evaluating the proposed project. Based on the analysis in the EA, BPA has determined that the proposed action is not a major Federal action significantly affecting the quality of the human environment, within the meaning of the National Environmental Policy Act (NEPA) of 1969. Therefore, the preparation of an Environmental Impact Statement (EIS) is not required, and BPA is issuing this FONSI.

Copies: For copies of this FONSI or the EA, please call BPA's toll-free document request line: 800-622-4520. It is also available on our website at www.efw.bpa.gov.

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Public Availability: This FONSI will be distributed to all persons and agencies known to be interested in or affected by the proposed action or alternatives.

Supplementary Information: BPA proposes to continue funding the Avian Predation on Juvenile Salmonids in the Lower Columbia River Research Project which began in 1996 as a requirement of the incidental take statement that the National Marine Fisheries Service (NMFS) issued to agencies that operate the Federal Columbia River Power System (FCRPS). This project involves the following activities: (1) Survey the managed Caspian tern colonies in the Columbia River estuary and along the Washington coast, (2) study the food habits, energy requirements, and smolt consumption rates of managed adult and pre-fledgling Caspian terns nesting in colonies in the Columbia River estuary, (3) determine foraging distribution, foraging range, and habitat use of managed Caspian terns in the Columbia River estuary and along the Washington coast, (4) survey unmanaged double-crested cormorants and glaucous-winged/western gull nesting colonies in the Columbia River estuary and unmanaged Caspian terns nesting on the lower Columbia River above John Day Dam, (5) study the food habits, energy requirements, and smolt consumption rates of unmanaged double-crested cormorants

nesting in the Columbia River estuary and unmanaged Caspian terns nesting on the lower Columbia River above John Day Dam, (6) determine foraging distribution, foraging range, and habitat use of unmanaged double-crested cormorants nesting in the Columbia River estuary and unmanaged Caspian terns nesting on the lower Columbia River above John Day Dam, (7) study the food habits of double-crested cormorants nesting in Grays Harbor, (8) monitor effects of this research on endangered California brown pelicans roosting on East Sand Island, (9) ensure tern colony restoration by removing predatory birds from the East Sand Island Caspian tern colony under the direction of the Interagency Caspian Tern Working Group, and (10) provide technical assistance to the Interagency Caspian Tern Working Group.

Published research suggests that avian predation can, under some conditions, be a substantial source of mortality for juvenile salmonids. In 1995, 11.3% of radio-tagged yearlings (11 of 97) and 4.1% of subyearlings (4 of 71) fell prey to gulls below The Dalles Dam. In 1996 and 1997, between 10% and 30% of radio-tagged chinook yearlings in the Columbia River estuary were consumed by terns or cormorants nesting in that area. Researchers estimate that the Caspian terns nesting on Rice Island in 1998 consumed 7.4 million - 13.2 million smolts. In 1999, an estimated 8.3 million - 15.9 million smolts were consumed by Caspian terns in the Columbia River estuary.

Due to concern about the impacts of avian predators on ESA-listed salmonids, regional fish and wildlife managers who are members of the Interagency Caspian Tern Working Group (Working Group) sought to relocate the Rice Island tern colony in 2000 to a new site on East Sand Island, 21 kilometers (km) closer to the ocean, where it was hoped terns would consume significantly fewer juvenile salmonids. Over 94 percent of the terns shifted to East Sand Island, where nesting success was nearly four times higher than at the Rice Island colony. The relocation of nearly all the nesting terns from Rice Island to East Sand Island resulted in a sharp drop in consumption of juvenile salmonids as compared to the previous year: juvenile salmonids comprised 44 percent of the prey items of terns nesting at East Sand Island, compared to 91 percent of prey items at Rice Island.

Although management actions implemented by the Working Group in 2000 resulted in a substantial reduction in the numbers of salmonid smolts being consumed by Caspian terns in the estuary (Collis et al. 2000), the Working Group needs to continue to monitor current management activities to determine if they are meeting their objectives to reduce predation on ESA-listed species. Furthermore, decisions regarding future management of currently unmanaged bird populations depend upon results from the research activities proposed as part of this study.

This project was recommended for funding by BPA under the Northwest Power Planning Council's Fish and Wildlife Program and is to be jointly conducted by the U.S.

Geological Survey-Oregon Cooperative Fish and Wildlife Research Unit, Oregon State University; Columbia River Inter-Tribal Fish Commission; and Real Time Research (RTR) Consultants.

Two possible alternative plans have been identified and are addressed in the EA (Chapter 2). Briefly, they are as follows:

Avian Predation Research: BPA would fund the efforts to continue the research on Caspian terns, double-crested cormorants, and glaucous-winged/western gulls begun in 1996. Much of the focus would be to measure the salmonid smolt consumption rate of managed Caspian terns in the Columbia River estuary; of unmanaged tern, cormorant, and gull populations located in the estuary; and of unmanaged upriver tern populations. In addition, BPA proposes to fund a study of the impacts of this research on the population of brown pelicans roosting on East Sand Island in the Columbia River estuary and to study the potential impact of re-establishing a tern colony in Grays Harbor, Washington.

No Action Alternative: BPA would not fund the Avian Predation on Juvenile Salmonids in the Lower Columbia River Research Project. As a result, it most likely would not be implemented. This alternative would not allow evaluation and refinement of management actions previously implemented by the Working Group to reduce the consumption of juvenile salmonids by piscivorous waterbirds in the Columbia River estuary.

Table 1 in the EA summarizes the impacts of these two alternatives. The negative impact of the no action alternative is not acceptable because it would not be consistent with the Northwest Power Planning Council's Fish and Wildlife Program, and it would not complement the activities of fish and wildlife agencies and appropriate Tribes. Additionally the no action alternative would not provide needed data to evaluate existing management actions to reduce the impact of fish-eating birds on salmonids, which could result in higher impacts to juvenile salmonid populations if populations of birds are not managed. The no action alternative would also not aid implementation of actions called for in NMFS FCRPS biological opinions from 1995, 1998, and 2000.

Appendix C of the Final EA further describes how the potential disturbance of brown pelicans will be monitored and mitigated. The U.S. Fish and Wildlife Service (USFWS) may suggest additional measures after their review of the Biological Assessment submitted to them by the U.S. Army Corps of Engineers (Corps) and BPA. The parties responsible for the mitigation are the research group members—the Oregon Cooperative Fish and Wildlife Research Unit at Oregon State University; the Columbia River Intertribal Fish Commission; and RTR, a private research firm.

BPA has determined, based on the context and intensity of the impacts identified for the preferred alternative (funding the avian predation research), that they are not significant, using the definition of this concept in Section 1508.27 of the *Council on Environmental Quality Regulations for Implementing the National Environmental Policy Act*. This determination is based on the following discussion of the points in section 1508.27.

- 1) The project aims to assess previous management actions taken to reduce bird predation on depressed stocks of ESA-listed fish in the lower Columbia River. The research itself will not have any significant beneficial impacts to the depressed stocks; however, the information from the research will be available to guide wildlife management agencies (the Working Group) in their management decisions regarding bird predation on these stocks.
- 2) Implementation of the proposed action would not affect the health or safety of the people of the project area. Shooting birds with shotguns will be done only when there is a safe distance between the shooters and any other people in the vicinity.
- 3) The project would take place in the Columbia River, Grays Harbor, and on various islands in the Columbia River. No ground disturbance is planned; thus no sensitive areas such as historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas would be affected.
- 4) The impacts of actions proposed under the preferred alternative are not significant due to their controversy. Many of the comments that surfaced during the development and review of the preliminary EA focused on the management actions being undertaken by the Interagency Caspian Tern Working Group. These actions have been addressed in an EA and FONSI prepared by the Corps entitled, "Caspian Tern Relocation FY 2001-2002 Management Plan and Pile Dike Modification to Discourage Cormorant Use, Lower Columbia River, Oregon." Other comments focused on concerns about the disturbance to California brown pelicans roosting and double-crested cormorants nesting near the Caspian tern colony. Further discussion with USFWS staff has resulted in some changes to the research activities to mitigate these concerns and ensure they are not significant. These and other comments on the research activities have been addressed in the final EA and are found to be resolvable within the scope of this project. Overall, given the large numbers of Caspian terns and double-crested cormorants in the study area, the direct or indirect fatalities to individuals resulting from this research project are *de minimus* and will not significantly adversely affect either population.
- 5) The impacts of the proposed action are not significant due to the degree of highly uncertain, unique, or unknown risks. This is a research project intended to evaluate previous management actions. While staff at the USFWS were concerned about the potential risks to the California brown pelican colony on East Sand Island due to disturbance by researchers, mitigation measures outlined in the Final EA will ensure this disturbance is not significant and will scientifically document the extent and effects of the disturbance. Moreover, these staff concerns were in contrast to

decisions already made by the USFWS. The USFWS submitted a report to Congress, in response to FY2001 Interior and Related Agencies Appropriations Act Committee language in H.R. 106-646 and S.R. 106-312, in which the USFWS said its 2000-2001 management recommendations for terns included support for continued research and monitoring activities to evaluate the effectiveness of tern management actions. The USFWS anticipated issuing scientific collecting permits under the Migratory Bird Treaty Act for this research. The USFWS also made a commitment to “contribute funds to develop tern nesting habitat on East Sand Island.” BPA concludes that the USFWS managers who speak for the agency had already determined that this research posed no significant risk to California brown pelicans or other resources.

- 6) The actions proposed would not establish a precedent for future actions with significant effects or represent a decision in principle about a future consideration.
- 7) The proposal is not connected (40C.F.R. 1508.25 (a)(1)) to other actions with potentially significant impacts, nor is it related to other proposed actions with cumulatively significant impacts (40 C.F.R. 1508.25 (a)(2)). Although the proposed action is related to actions being addressed under the Corps’ EA and FONSI, "Caspian Tern Relocation FY2001-2002," it is not precluded by 40 C.F.R. 1506.1 or 10 C.F.R. 1021.211 because it is research with utility that is independent of the Corps’ action. Moreover, as small-scale pure scientific research this is, per se, not a major Federal action and would not significantly affect the quality of the human environment (Department of Energy Regulations for Implementing NEPA, 10 CFR 1021, Subpart D, Appendix B B3.3, and Appendix C C8).
- 8) As much of this project is located on previously disturbed ground and does not involve additional ground disturbance, this project would not adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or cause loss or destruction of significant scientific, cultural, or historical resources.
- 9) The following listed threatened or endangered species are found in the vicinity of the proposed actions: California brown pelican, Bald eagle, Western snowy plover, Oregon silverspot butterfly, and Howellia. The Corps has submitted to the USFWS a Biological Assessment that addresses the effects of the proposed research activities on these species. The Corps and BPA have determined that the proposed research activities would have no effect on Western snowy plovers, Oregon silverspot butterflies, or Howellia. We also have determined that the activities may affect, but are not likely to adversely affect, Bald eagles and California brown pelicans. Measures outlined in the Biological Assessment and EA to minimize effects on these two species will be strictly adhered to by the researchers. We have requested concurrence with our determinations from the USFWS.

- 10) The actions proposed would not threaten to violate Federal, State, or local law or requirements imposed for the protection of the environment. The following permits and consultation will be required and will be obtained: Migratory Bird Treaty Act collection permits and Section 7 consultation on endangered species.

Determination: Based on the information in the EA, as summarized here, BPA determines that the proposed action, the Avian Predation on Juvenile Salmonids in the Lower Columbia River Research Project, as described and analyzed in the EA, is not a major Federal action significantly affecting the quality of the human environment within the meaning of NEPA, 42 U.S.C. 4321 et seq. Therefore, an EIS will not be prepared, and BPA is issuing this FONSI.

Issued in Portland, Oregon, on April 5, 2001.

/s/ Sarah R. McNary for _____
Alexandra B. Smith
Vice President
Environment, Fish and Wildlife Group